

Educational Supplement

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Break

New wave

The third wave of Leicestershire community colleges are now getting going. For nearly 20 years, the county has been gradually rolling adult and further education into the top tier of schools and at the same time devolving day to day responsibility from the centre to the colleges.

It got a special puff for its efforts from Mrs Shirley Williams when she was speaking at a conference of Leicestershire heads at Hild Leys Community College, Shepshed. Community colleges could ease the economics of contraction, she said.

Hild Leys is the first of three new colleges on the latest model to open. Housed in brand new glass buildings which look untemporarily like temporary buildings, the college took in its first 250 full-time school pupils (14 and 15-year-olds) in September from the 11 to 14 high school next door. It will build up year by year to around 720.

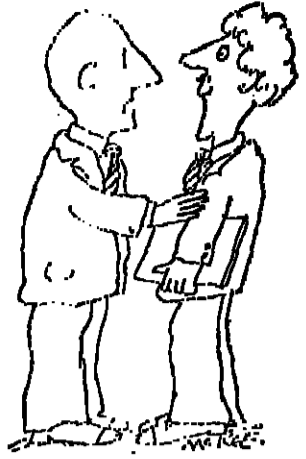
tion rights which would make seven more expensive than six.

Three all the limitations are allowed for, the amount of the £300,000 budget for this year which the college can actually play with is about £7,000.

It can similarly plough back the swimming pool takings. It can run a deficit on its youth budget and finance it from savings elsewhere. It can make its own negotiations with the local bank to give them all its business in exchange for waiving bank charges. It can decide for itself what fees to charge for adult courses or for use of the credits and playground.

Another sweeping statement from Mr Fairbairn is that staff are being appointed on a new contract, part school teaching, part adult teaching. That sounds simple enough, but teaching adults each week.

It is more complicated than that. The new contract has not only simple and even now only half the 20 staff will have such contracts in September. Furthermore, the teaching unions have stuck their toes in with the result that those on the new contracts will get an extra £125 "honorarium" a year. "We are in danger of having first and second class citizens," the principal says. "The whole philosophy could suffer."



"I don't care who asked General Ainslie to the fore. Is he coming?"

There is again subject to the limitations the extent of which are not yet very clearly established—real power in these committees.

Black comedy

It would have been comic if it had not been so tragic gathering several hundred students into a theatre and saying to them: "Right, now you are getting near the end of the three or four years you have spent training to be teachers we are going to tell you about a few other professions where, by contrast, you might get a job."

This is what happened at Newcastle Polytechnic last Friday. Facing up to the bleak realities awaiting final year students, Mr Paul Chubb, assistant appointments officer, organized a 12-hour careers convention that brought speakers from half a dozen areas of employment where teachers might fit in, and more than fifty local employers the students could talk to in the evening.

work studies: "There is something different about a teacher's intelligence from a social worker's. We're a bit weird. So keep a bit of kink up your sleeve."

There were no more than 30 in the auditorium when the attractions of the retail trade were wheeled out. "This was a pity because the speaker was clear and forceful and let it fall that nowadays states recruited teachers as staff trainers, then taught them something about retailing, in fact of the other way about as used to happen."

Fight the cuts

Irate parents and teachers from South Hackney may soon be descending in coachloads on the County Council's headquarters in County Hall to protest against the cuts which will mean three fewer teachers this year in their improving East London comprehensive.

Next week

An assessment of the Assessment of Performance Unit, Martin Leonard. Books: Peter Hebblethwaite, 'The Water Babies'; Charles Kingsley, 'The Water Babies'; John Galsworthy, 'The Forsyte Saga'; 'The Water Babies' by Peter Hebblethwaite.

but it is obviously not popular in individual schools which have been expanding and improving for some time.

A rapidly declining number of teachers insisted, South London should keep all its teachers and allow on falling rolls to improve their education to improve priority multiracial area.

Ulster at last gets green light to go comprehensive

Following years of pressure, the Government this week announced a decision to introduce comprehensive education throughout Northern Ireland. But it has not given any encouragement to the idea of religious integration.

Where the money goes

On the latest volume of DES statistics on educational finance (TES, June 3, 1977), comes another study commissioned by Mr Richard Hooper's national development programme in computer assisted learning.

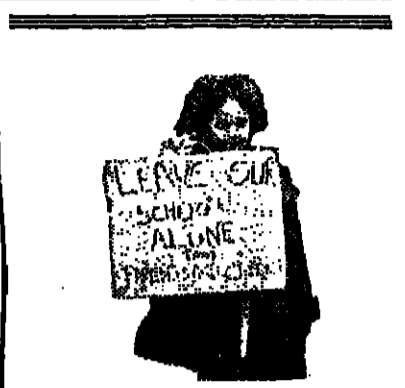
Ulster at last gets green light to go comprehensive

The Government did not lay down timetables for the introduction of comprehensive secondary schools. It invited the five education boards to draw up plans. It also set up new working parties to consider necessary changes.

It also accepted that no single system should be imposed throughout Northern Ireland, but that plans should be drawn up after consultation with local people and local schools.

Kingsley is next to godliness

The author of "The Water Babies" was obsessed with cleanliness, both physical and moral, argues Peter Hebblethwaite in an article, "England rinsed clean", page 22.



School closures

The Government has asked local authorities to consider closing schools as pupil numbers fall. Virginia Makins reports on how one such school is being closed page 4

Free information

Shirley Williams calls on schools to tell parents what they do. A 19-point list has been sent out for comments page 3

Schools council

In the nervous hours before publication of the Green Paper, planning for reform at the Schools Council tentatively continues. Joslyn Owen, co-joint secretary of the council, and Denis Lawton of the London Institute, analyse the challenges now facing the council. pages 3, 9

Assessing APU

Is the work of the Assessment of Performance Unit being jeopardized by political pressure? Martin Leonard examines this and other difficulties facing the Unit. page 19

Borough schools?

Education could be run by the former county boroughs if a Labour party plan gets off the ground. page 5

Planning change

Christopher Griffin-Beebe visits an urban studies centre which aims to give children the confidence to participate in planning processes. page 20

Your honour

The Birthday and Jubilee honours for those concerned with education. page 6

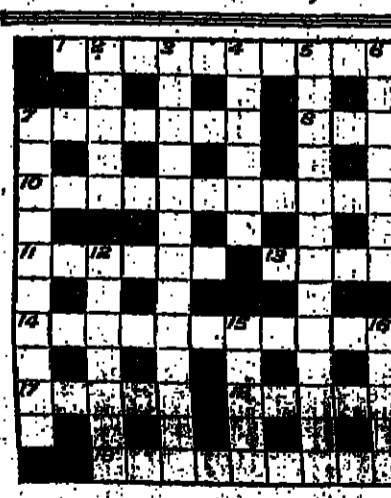
School to work

A Department of Industry committee has been told that education is not to blame for managerial weaknesses. Its report will focus attention on the need to improve industry's image in schools and society, as well as a simultaneous study by the British Association. page 11

Extra: Children's literature

pages 35-47

Crossword No 1,089



Across: 1 A member of the... 2 Surprising quality of... 7 Expecting... with... 8 Representation of La... 9 Step by step instruc... 10 It's harmful to be... 11 A member of the... 12 Surprising quality of... 13 Expecting... with... 14 Representation of La... 15 Step by step instruc... 16 It's harmful to be...

Down

1 Designed for pipe... 2 Passenger who got a... 3 Flash of the Engi... 4 When we really enj... 5 Divine femme fatale... 6 Yet goes afoot in... 7 There's no telling... 8 He got hemmed in... 9 A member of the... 10 Surprising quality of... 11 Expecting... with... 12 Representation of La... 13 Step by step instruc... 14 It's harmful to be...

Solution to Puzzle No 1,088: 1. ... 2. ... 3. ... 4. ... 5. ... 6. ... 7. ... 8. ... 9. ... 10. ... 11. ... 12. ... 13. ... 14. ... 15. ... 16. ...

Maths teasers

A NEW PROOF OF PYTHAGORAS' THEOREM: ABCD is any rectangle, with diagonals AC and BD intersecting at E. The line through E perpendicular to AC meets AB at F and CD at G. The line through E perpendicular to BD meets AD at H and BC at I. Prove that FHIG is a rectangle.

CAN YOU COUNT? Any shape of triangle ABC has been divided into small triangles by sets of four lines parallel to each side. The small triangles that appear "upside down" have been counted: 10.

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Reorganization of the much-criticized Schools Council, the guiding body in curriculum planning and examinations, went a step further this week. The council's internal review body met to discuss a plan to change it into a two-tier structure. The proposals, from Sir Alex Smith, the

## Curriculum: case for power-sharing

One of the myths of English education is that schools have a long tradition of freedom to plan their own curricula. This is historically untrue. Primary schools had their curriculum clearly laid down until 1926, and the secondary curriculum was rigidly controlled by regulation until 1944.

The 1944 Act does not contain any reference to the word curriculum and, as everyone knows, only religious instruction is a statutory necessity. Why? It is difficult to be sure about this, but it is likely that it might have been a Tory plot, according to Timothy Raison, a bureaucratic omission. A possible answer is that the 1943 White Paper and the subsequent Act were leaving curriculum decisions in the hands of the schools. But in fact the Norwood Report made matters worse, not only by failing to lay down any kind of minimum curricular requirements but also by recommending abolition of the group examination in secondary schools at 16 and its replacement by single-subject examinations. Schools were now completely free to "plan" their own curriculum.

What puzzles me is why it should be regarded as virtuous to have a laissez-faire policy on the curriculum. But in fact the Norwood Report made matters worse, not only by failing to lay down any kind of minimum curricular requirements but also by recommending abolition of the group examination in secondary schools at 16 and its replacement by single-subject examinations. Schools were now completely free to "plan" their own curriculum.

The other great weakness of the British secondary curriculum is that it has serious gaps for a curriculum in the 1970s. In particular, it leaves many children almost completely ignorant of technology and allows most children to leave school at 16 very badly educated in the political, economic and social structure of their own society.

The real scandal of our education system is not that some industrialists appear to be alarmed by the attainment in basic skills achieved by a small proportion of school leavers, but that many children still do not have access to a really worthwhile curriculum.

By the early 1960s it was clear that dissatisfaction with the curriculum was shared by the DES and some ministers. David Eccles even suggested that he should be allowed to "take over" the curriculum. This was a dramatic change from the good old days when Tomlinson boasted complacently that he knew "nowt

council's chairman, are for a convocation of about 50 members which would not be controlled by teachers, and a professional board which would have a teacher majority. An interim report on revamping the council will be presented to the governors next month.

about the curriculum". But by the 1960s teachers, or at least the teachers' unions, had grown accustomed to the laissez-faire position and were unhappy about the prospect of a degree of central control in the proposed form of the Curriculum Study Group, especially when it was described as "a kind of commando unit". The result of their protests was that the central influence of the Curriculum Study Group soon gave way (in 1964) to the Schools Council.

It may be no coincidence that this was a time of severe teacher shortage, and teachers clearly had more industrial muscle than they have now. For whatever reason, teachers were given a majority voice on all matters committed to the Schools Council and the policy was established that the council was not a curriculum planning body which would lay the foundation for a basic national curriculum; the council was established merely as a national centre for curriculum development and research. It has therefore operated on the cafeteria principle: teachers might

be offered three different varieties of science, for example, and they could choose whichever one they preferred, but no one at the Schools Council would say that every pupil should study science. The laissez-faire principle once again.

Now the Schools Council is under attack, ostensibly because teachers have not involved the rest of the community sufficiently in their deliberations and decision-making. Is this the real reason? Probably not. At a time of financial cuts, there is a swing of power to the centre—the paymasters.

But if the DES wants this kind of power, it has to handle the situation very delicately. Let us look at the recent past and see how offensive this might appear if such events happen too frequently. After long negotiations within the profession, the Schools Council recommended a new grading system at the Education Secretary (then Mrs Thatcher), presumably acting on the advice of her civil servants, refused to accept the Schools Council's recommendation. Last year it happened all over again with Mrs Williams who, on the advice of her civil servants, refused to accept

Here, DENIS LAWTON looks at the history of curriculum planning and that a degree of central control had thing. Right: JOSLYN OWEN, the Schools Council's record since its present predicament.

## Schools Council: a beginning, a middle... and now?

Pragmatism is not enough: that Jack Wrigley's appropriate message to the Schools Council for the last days of its middle period in 1975. To look upon the history of the Schools Council as a three-act drama is in fact, in the first phase of its life, the council's idealism contrasted with inactivity in the curriculum as well as with a lack of any sense of its importance—as a whole as a collection of subjects and disciplines. Its birth coincided, too, with a lack of awareness that advisory services in local authorities might have a major impact on curriculum. In the second period, the process of developing the curriculum was supported by a pitifully small operation of training and of the in-service education of teachers. This inactivity and lack of a sense of its importance was not surprising, however, and Newson had indeed made criticisms of secondary education and it was expected in the 1960s, by those who thought far ahead, that Gittins and Newson would do the same for primary education. But 1964 was a year in which local education authorities, local authority associations, teachers' associations, individual schools distinguished themselves in any effort of self-appraisal.

(There is also a call for four equivalent levels of national minimum standards. To make its first point, the Schools Council had to rely on a combination of unannounced visits and sensitivity of its public representatives—and of work-like practicalities which might help considerably if we had other people were willing to do this.)

When the Prime Minister's Secretary of State for Education announced his intention of appointing a committee to look at the curriculum, it was a matter of fact that the Schools Council had already been set up. The four years of its existence have been a period of intense activity and in particular, with the early expressions of idealism in the matter of work approach, the Schools Council has been already at work in the education system. The four years of its existence have been a period of intense activity and in particular, with the early expressions of idealism in the matter of work approach, the Schools Council has been already at work in the education system.

There is a need for some kind of national council to reach agreement about a basic curriculum; there is also a need to ensure that too much power does not swing to the centre so that when money is short any new development in education could be blocked. How could this be avoided?

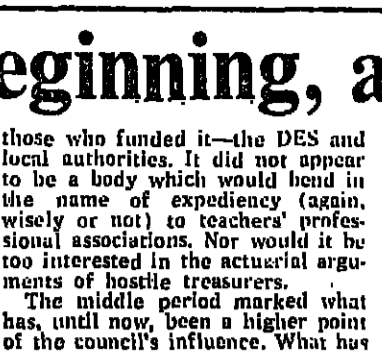
In my view there is no necessary conflict between a certain kind of central influence on the curriculum and the maintenance of the professional autonomy of teachers. There is a good deal of woolly thinking in this area but it would help if we thought of curriculum planning as necessary at a number of different levels:

1. National. There is a need for certain guidelines to be laid down, not a detailed curriculum but a charter of pupils' educational rights in terms of the knowledge and experiences every school should be obliged to offer. The Schools Council might advise the Secretary of State on this. It would stop far short of the kind of detailed curriculum which the NUT in particular has rightly denounced.

1966 to 1970 witnessed a growth of interest in the reform of curriculum among some teachers, some local authority staff and some university intellectuals. This second period was the time when teachers' associations could have given a lead to their members in understanding the full role of the Schools Council. But there were at that time few examples of encouragement given to teachers to support the council's work. By contrast, those subject associations which were already active in the work of reform were particularly glad to invoke the interest and support of the Schools Council.

This second period had the advantage of two publications: *Inquiry 1* had revealed the gulf between pupils, parents and teachers at the end of compulsory secondary education. Further, in 1970 the council published *Inquiry 2*—three volumes of the findings of surveys about post-16 education. It is remarkable that this attracted no major public attention despite the fact that it affected more than two thirds of the country's families.

Despite the irony that some of the Schools Council's good work was being ignored at the time when education was hitting the crest of the wave, the middle phase can still be typified as one of vivacious self-awareness. This was the time when teachers' centres (400) were established, when in-service training schemes were overhauled and when advisory services—with the 1974 re-organization of local authorities casting a long shadow—were improved. In the broadest sense, innovation in education achieved respectability. The six-year period which culminated, as we would say, in the 1972 White Paper, reflected the best and the worst reactions of local education authorities to the Schools Council. Mand was succeeded by Bullock. This meant that the committed, professional and broadly liberal interests of the first chairman inevitably went through some reinterpretation. The transition brought out the strengths of the council. It was re-organized with other parts of the service now find their future threatened. White Papers on public



by Joslyn Owen

## 'The council... is caught amid complex criticisms about education'

followed has been coloured by notions of apologetics and by a belated search for friends and supporters. The present phase lacks idealism, realism and vivacity. This is the direct responsibility of those who direct the council nor of those who execute its programmes. Climates have changed. We now question the costs—but it sometimes seems only the costs—of improvement. We live through a time when area training organizations are dead but when nothing has been agreed to take their place. Advisory services are under critical review. In-service training is spotlighted not because of its efficiency or failure but because of the amount of money spent on it. This is a time when those who should be responsible for the improvement of curriculum are separated from each other. Some colleges of education who used to cooperate with other parts of the service now find their future threatened. White Papers on public

expenditure give no protection to teacher improvement other than words. We wander around in a limbo of argument about earmarking parts of the rate support grant for in-service training and induction. As time elapses, the arguments broaden to an extent that they cannot be comprehended in practical terms. The council is trapped. It cannot extend its activities in the development of curriculum without justifying itself in terms of the Green Paper. It cannot argue for an extension of development which is simply innovative. It is caught amid very complex criticisms about education.

To return to the Schools Council, pragmatism is either insufficient or too late. The present quandary of the council can be understood partly through history. But it is also to be illuminated by the answer to the question: what is dissemination the same thing as the spread of influence? Also, has the connexion between curriculum and exams the same significance now as it had in 1964?

The council, in its policy of dissemination, has concentrated on discrete efforts connected with individual projects. Good ones (that is, practically acceptable projects) have elicited broad support. Weak projects have discredited not only themselves but the council as well. In attempting to create a broad spread of influence, separate from the effects of single projects, the council has depended upon the appeal of its publications and upon the work of its field officers. The latter are too few, too temporary and too loosely committed, as it seems, to the broad aims of the council to have had much chance of lasting success. Publications about educational development have multiplied too rapidly to allow the council to maintain its particular distinction. The council's policies about dissemination and spread of influence have been weak. Equally weak has been its role in connecting curriculum and exams. The Secretary of State's prime position on exams places her in a niche of superiority and control. This contrasts markedly with the role

The author is chief education officer of Devon. He was joint secretary of the Schools Council in 1966-67.

## Teachers turn down Ulster transfer scheme

Northern Ireland teacher unions have rejected a transfer system designed to replace the 11-plus. But they are likely to agree to operate the new arrangement for an interim period of two years. The new system, which was recommended by a government working party in April, works through schools compiling transfer reports on children, with details of such things as attainments in arithmetic, English and verbal reasoning. Parents would express a preference for a school in much the same way as in the Inner London Education Authority.

Mr Eamon O'Kane, a teacher in a Belfast secondary school, said that while the scheme resembled that in the ILEA, a significant difference was that in London there was a declared intent for the scheme to become comprehensive within a set time. "Such a declaration has to be made for Northern Ireland and in this context there is real fear that these so-called 'interim' proposals will become permanent," Mr Bill Herron, N.A.S.U.W. regional officer, said there was a real danger of disputes between parents and teachers on individual assessment, and this could sour the

relationships between the school. The delegates agreed that the union would engage the union committee for two years, on condition that consideration is given to the transfer scheme as well as leaving it in its duty and better help. Although the Irish Teachers' Association has endorsed the report, it has expressed its reservations more prominently than the ILEA's endorsement. A clear and unequivocal sign by the Minister of secondary education, announced

<p><b>Run over by farm vehicles</b></p> <p>Barry Age 5 Nigel Age 3 David Age 15 James Age 1½ Nick Age 2 Alan Age 5 Stephen Age 3</p>	<p><b>Drowned or suffocated</b></p> <p>Louise Age 2½ Sarah Age 3 Thomas Age 4 Guy Age 2 Phillip Age 2 Robin Age 4 Richard Age 8</p>	<p><b>Crushed by overturning tractors</b></p> <p>Michael Age 10 Paul Age 13 John Age 11 Timothy Age 13 Alan Age 15 Gillian Age 9 Desmond Age 15</p>	<p><b>Burned to death or electrocuted</b></p> <p>Harry Age 12 John Age 14</p>	<p><b>Killed by falling objects</b></p> <p>William Age 2 Linda Age 12 Sally Age 5 Roderick Age 3</p>
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# Send for this film now. It could save a child's life.

"Apaches" is a twenty seven minute film, made because twenty one children died in farm accidents last year. Fifty three children died in the previous two years. Their names are listed at the end of the film. If those children had been made aware of the dangers of their games in and around modern, mechanised farmyards, they might be alive today. Designed for screening to young audiences, "Apaches" is the story of a gang of children playing Cowboys and Indians among potentially lethal pieces of farm equipment. It illustrates, clearly, the sort of situations in which a peaceful corner of a farmyard can become a deathtrap. Borrow this 16mm film now - IT'S FREE. Teach your children that playing on farms can be playing with death.

Please send me "Apaches" for screening on \_\_\_\_\_ (Date)  
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Address \_\_\_\_\_  
Tel. No. (for confirmation) \_\_\_\_\_  
Organisation \_\_\_\_\_  
**Central Film Library**  
Government Buildings, Bromyard Avenue, Acton, London W3 7TB. Tel: 01-743 5555.

# Teachers turn to parents in cuts fight

Parents in Oxfordshire have been asked to support the National Union of Teachers' campaign against the county's cuts in education spending. The union has printed 70,000 copies of an open letter to parents and a campaign leaflet which sets out the teachers' case against school staffing cuts.

The letter says that teachers have withdrawn their supervision of pupils during lunch breaks and, from next Monday, will refuse to teach classes with more than 32 children in primary schools, 27 in reception classes and 30 in secondary schools.

Strikes in selected schools will follow on June 28 unless the county council moves to reduce the cuts. Oxfordshire's cuts include the loss of 34 teaching posts including redundancies of more than 150 people.

A ballot of NUT members in the county produced a 90 per cent majority in favour of class size action while 78 per cent voted for a strike.

A last-minute effort to resolve the dispute was made last week when Mr John Gray, NUT president, met the authority's leaders for nine hours of talks. Deadlock was reached when no improvement of the pupil-teacher ratios could be agreed.

Mr Fred Jarvis, NUT general secretary, said the dispute was the most serious confrontation the union had faced with a local authority over cuts in staffing standards.

A spokesman for the county council said they were willing to hold further talks, but that "neither side has done anything to arrange a meeting."

The staffing cuts would mean a deterioration of the pupil-teacher ratio in primary schools from 23.5:1 to 25.5:1. In secondary schools it would come from 17.0:1 to 18.1:1.

The NUT claim that Oxfordshire, which is now halfway in the league table of staffing standards, would jump to 101st out of 104 authorities for primary schools and 103rd for secondary schools.

Parents are also told that there is £6.25m in the county's contingency fund and reserves of £2.9m. They are urged to write to their MPs, local councillors and newspapers and raise petitions, organize meetings and put pressure on the county council. About 200 Oxfordshire schools were affected by the ban on school meal duties this week.

# School planned on site of Iron Age fort

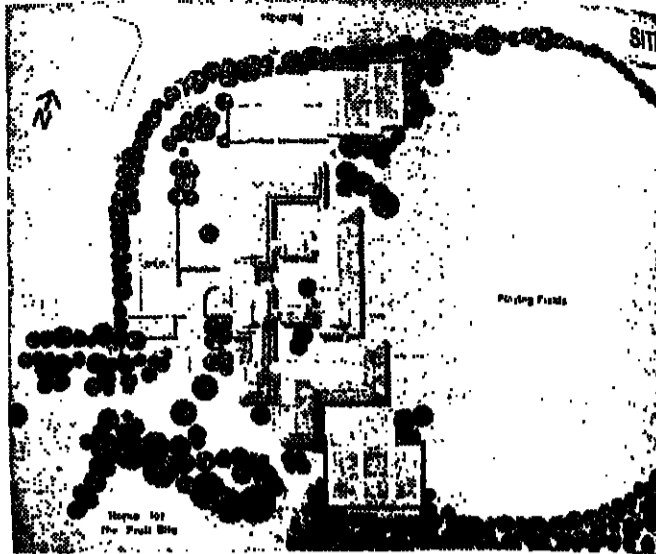
An Iron Age fort at Winklebury Ring, near Basingstoke, Hampshire, is being converted into one of Britain's most unusually sited schools. The site was excavated by archaeologists last year and the new secondary school is now under construction within the ramparts of the prehistoric fort. It is due to open in September.

The educational showpiece is expected to cost £984,000—nearly £200,000 above the original estimate. But a county spokesman says the increase reflects soaring construction costs, not planning extravagance.

Trevor Harris of the county architects' department says the scheme's cost is realistic. "It is not a penny more than any secondary school built in Hampshire today. We have endeavoured to give the school an aged quality with links back to the past, without carrying plagiarism too far," he says.

The floor level of the new school is on the excavated area left by the archaeologists, the architects have tried to reduce the bulk of the building to make it blend in with the natural landscape. During the Iron Age the fort would have certainly been a busy place, with a stocker and so on, a modern stockade fence is being erected around the perimeter of the school.

One of the greatest difficulties confronting the planners was devising a suitable window, which would counter the severe westerlies, without screening the



fort from the public's view. They say a compromise has been found in a variety of chalkland trees. These will reinforce the existing stands of beech and help to outline the fort's boundaries, while the building elevations are scaled to give extra protection.

A second development phase will include an open courtyard interspersed with the classroom-intended to promote a college atmosphere; drama facilities and £100,000 worth of "community extras" sponsored by Basingstoke District Council.

The district plans include an upper floor meeting area with a licensed bar away from the mainstream of student activities. The accent will be on entertainment, with a minimum of formality.

Praising the county's imagination in masterplanning the unique history-book school is Dr Geoffrey Wainwright, an inspector of ancient

# School to work



This week: crisis in engineering • monitor system • science and technology • industrial experience.

# Two reports recommend improving the image of production engineers

by Mark Jackson

A number of the biggest multinational companies have made it plain to the Department of Industry that they do not consider the weaknesses of British industrial management are caused by any alleged defects of the education system. They blame instead the tax system and union conflicts for making industry unattractive to able graduates.

Top managers and senior executives from multinational and British companies have given their views to a Whitehall working party on industrial management. Headed by Miss Anne Mueller, an under secretary in the Department of Industry, it has spent a year trying to identify the problems behind poor manufacturing performance.

The working party, which includes representatives of the Department of Education and Science and of Her Majesty's Inspectorate, has been particularly concerned with the problems of getting more graduate engineers into active production, and of using them more effectively in that role.

Although its report has not yet been published, some of its earlier discussions have already proved influential. The relaxation of the rules about sandwich course payments to allow employers to top up grants, and the establishment of high-status industrial scholarships are among the measures which have been adopted by the government following discussion by the committee.

The working party has spent much time considering the effectiveness of the educational system in relation to the needs of industry. The report will set out the issues that will not make any judgments, although there is agreement that industry must improve its image in the schools.

One member of the working party called it "a piece of very elegantly-drafted buck-passing". He said: "Although the report sets out what it calls action points, it doesn't actually specify any real action. As far as education is concerned we more or less outline the controversies of the Great Debate and leave the debaters to get on with them."

Meanwhile a more compact survey of the same field is nearing completion at the University of Aston. Sponsored by the British Association for the Advancement of Science, it is looking at ways



ASE award winner with the Duke

# Duke praises 'useful type' of science

Schools should concentrate more on the usefulness of science and less on its beauty and abstractness, said the Duke of Edinburgh when he presented the Association for Science Education awards for outstanding work in middle schools last week.

The Duke's interest in technology is well known. He said science was for industry and citizenship as well as for inquiring minds. "There is room for a great deal more of the useful type of science in basic education," he said. "Science teachers could have a great deal of influence on their pupils' attitudes to careers and employment."

First prize in the award scheme went to Mr Peter Evans, headmaster of Holsworthy Primary School, Devon, for his description of the teaching of technology in his school. The Duke told him his work would encourage others. "You cannot spread apititude for teaching but you can spread knowledge about it," he said.

# In brief

## Industrial experience part of poly teaching course

Students on teaching degree courses at Sunderland Polytechnic will in future have to spend some time in industry.

In the four year maths and science BA or BSc honours courses, which start in September, there will be three months spent in industry. BEd students on the business studies course will have six months.

The polytechnic says the experience will prepare the students to cope with some of the problems

of trying to prepare young people for work.

Students who decide during the maths and science course that they prefer a career outside education will be able to drop teaching studies and complete their BA or BSc degrees in three years. The business studies students will be able to choose in the final year whether to take a BEd or a BA.

## Engineering future

The jobs available for young people who want to go into engineering and the courses they can take on leaving school are given in a new leaflet *A Future in Engineering*, published today by the DES. The leaflet describes how to go about

## Between times

A new guide to opportunities for voluntary work before, during and after higher education is given in a new guide from the Careers Research and Advisory Centre. Aimed at sixth formers and students, *Time Between* lists voluntary jobs at home and abroad which are open to young people between leaving school and starting on a course of higher education. It is an updated edition of *White You Wait* and costs 95p from the publications department, Hobsons Press Ltd, Barchman Street, Cambridge.

# Impartiality is where 'Responsibility' starts

'Responsibility' is an already widely acclaimed, sensitively made film on all widely used contraception methods.

It has been specifically made for a senior school audience. It has been approved by many educational authorities and has won the Silver Award of the British Medical Association for new films.

It does not attempt to make judgements. It is impartial and approaches a delicate subject with unbiased responsibility. Which is why we gave it this title.

'Responsibility' is available in 16mm optical sound. Using both cartoon and live action. Age group 16-18 years. Teachers' notes are supplied with each booking.

The normal booking fee for 'Responsibility' is £2+VAT (two days hire). To obtain a privilege voucher for this amount and a booking form send this coupon to:

LR Industries Contraception Information Service, North Circular Road, London E4 8QA.

Name \_\_\_\_\_

School \_\_\_\_\_

Address \_\_\_\_\_

Status \_\_\_\_\_

(Offer subject to availability of prints)

# Warning: this photograph may explode

Chemistry teachers, and those in charge of school camera clubs, are warned against trying an incorrect version of a cheap make-it-yourself photograph. The warning comes in a letter to a typesetter, who forms for D23 developer was given incorrectly in the June 8 issue of the weekly *Amateur Photographer*. The chemical sodium was listed as a constituent. But if this was added to water an explosion would result.

The formula was given in an article entitled "What's in a developer?" The correct formula should have listed 100 grammes 7.5-hydrated sodium sulphite with 7.5 grammes of metol, to make up one liter with water. The omission of the word "sulphite" makes a harmless formula into an extremely dangerous one.

Sodium cannot be freely obtained, and great precautions are taken over its storage and transport. School laboratories would naturally follow these rules. But the danger is the risk that pupils—possibly members of a school photography club—could obtain the chemical by indirect means and put themselves seriously at risk.

# Courses favour maths and science

Experienced mathematics teachers will be able to improve their qualifications through a part-time MSc in mathematical education being offered for the first time this year at the Polytechnic of the South Bank in London.

Students will be given six advanced lectures for one afternoon and two evenings each week for two years. The course is the first of its kind to be approved by the Council for National Academic Awards.

Bickbeck College, London, was advertising for candidates for the only conversion course approved by the Department of Education and Science enabling teachers of other subjects to retain as science teachers. Applications are invited from trained teachers with O levels in mathematics or sciences who may qualify for grants for the special training award introduced by the Government last week, which could be worth double the normal grant. The full-time course lasts for one year and is designed for those wishing to teach science or physical science to 16 to 18-year-olds.

# Libraries 'noble' parents

Parents can do a lot to help their children become interested in books and language, says a report sent by the county library service to Hertfordshire's cultural and recreational facilities committee last week.

The report describes what libraries have in offer and what they do to encourage library school age. SA visit schools and playgroups to supply books, tell us give advice. They also books and noble them in and libraries in their they are attending health and clinics.

# Teach them about fire before they teach themselves

Containing a wallchart, a booklet, project sheets and teachers notes, this is Project Fire.

It's time to help your children answer all the questions you'll be asked about fire, in a responsible and interesting way. So please fill in this coupon for your Project Fire pack.

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# For those who can't-teach

Dr Robert Boyson's idea of putting unemployed teenagers into the army does not appeal, here is a rival scheme: get them to teach.

The idea is being discussed seriously at a weekend conference at Edge Hill college of education next month. The conference is for teachers and non-teachers intending to mobilise non-professionals, including unemployed teenagers, as tutors to assist teachers.

The advocates of the scheme, who include Dr Alec Dickson, of Community Service Volunteers, and Mr George Goodie, an Imperial College lecturer who writes on educational organisation, want the teachers to work with younger pupils under the supervision of teachers, and the standards they suggest are set nearly as high as those required of the army.

Younger children, it is claimed, benefit even when tutored by under-achievers who may improve their own reading ability in the process. The main aim is to help the tutor rather than the taught, say the conference organizers, who are clearly strongly influenced by Mr Dickson's continuing community service crusade.

The whole idea comes from America, where it is called "cascade" teaching. But the National Union of Teachers clearly see it as an attempted comeback for the nineteenth century monitorial system, under which older pupils acted as teachers.

The union's education officer, Mr Alan Evans said it was "a disturbing development" which could harm schools and the teenagers. He said the standards they suggest are "right in their concern, but wrong in their choice of a vehicle".

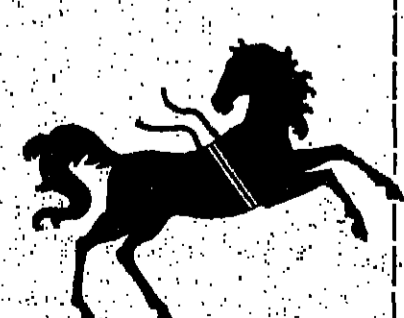
# Lloyds Bank Science Forums.

Lloyds Bank breaks new ground in educational sponsorship with a series of six Science Forums related to the 1977 annual meeting of the British Association for the Advancement of Science. The titles are:

1. Growing old.
2. Chemistry and bio-chemistry in the service of man.
3. What price the engineer?
4. The engineer—innovator or inventor?
5. Communication.
6. Energy sources.

The Lloyds Bank Science Forums are being broadcast for schools by BBC Radio Birmingham. Six 28-minute edited programmes are going on the air at 2.02pm on consecutive Wednesdays from 15 June to 29 July, with repeats at 4.30pm on Sundays from 19 July to 24 July.

A teaching pack, including the six broadcasts on three tape cassettes (available end June), is being produced for schools at only £1.00 plus 25p postage and packing.



Please send me \_\_\_\_\_ teaching pack(s) of Lloyds Bank Science Forums @ £1.00 each + 25p p&pp per pack.

Name \_\_\_\_\_

Address \_\_\_\_\_

Enclose £ \_\_\_\_\_ cheque/P.O. (made out to University of Aston, Lloyds Bank Sponsorship Account).  
To Howard Allerton, Organising Secretary, British Association for the Advancement of Science, The University of Aston in Birmingham, Gosta Green, Birmingham B4 7ET.









TALKBACK

Integrating the handicapped

Chris Kiernan Shirley Harries

One seven-year-old approaches another in the playground. He pulls at his sleeve and points to the lines painted on the ground, saying "Duggerd". "No; say 'train'!" says the second boy. "Clay", says the first, carefully, and they chuff along the line, one behind the other.

Community service failings Malcolm Groves

It seems that no school Christmas is now complete without a party for old age pensioners, a fact which many hearers those who believe community service can play a unique part in the educational and personal development of the young.



Reda Klose

Perhaps some questions will tell their own story? In how many schools that hold Christmas parties for the elderly did that party form part of a continuing relationship between the school and those senior citizens? For how many was that relationship a mutual one, in which the elderly contributed to the life and work of the school, as well as receiving from it, and receiving not just in the form of occasional or even regular visits from pupils, or out laws?

The country child

Ian Beckwith

Every Wednesday last term a parish councillor, a teacher, a priest, a housewife, and a child care worker joined firm and second-year students at Bishop Grosseteste College of Education to discuss the country child. They were drawn from the widespread rural communities of Lincolnshire, from Market Deeping, near the Cambridgeshire border, to the boundary with South Humberside in the north.

"Our function is not to discuss the particular brand of diesel fuel for combine harvesters," says Bill Goodhand, senior lecturer in geography, "but to look at the consequences for people that the increasing use of machines in farming brings."

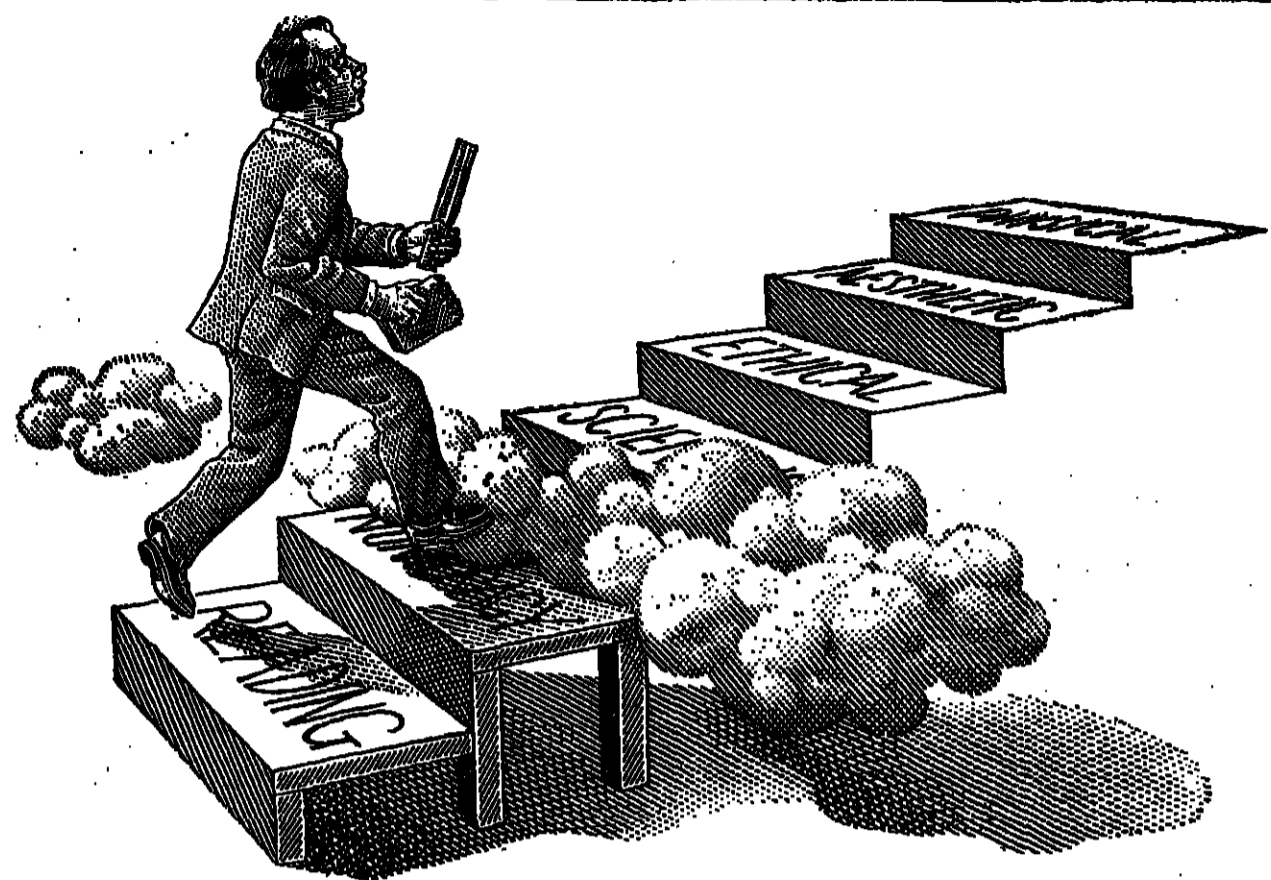
In Lincolnshire the problems of the country child are the problems of the whole community, not least in the matter of the provision of schools. Recently Bill Goodhand helped to make a television programme about rural schools in the county. Small two-teacher primary schools are not uncommon; the children are drawn from scattered farmsteads. To go on to secondary school means a long bus journey round the villages, collecting children in the morning, dropping them off at night.

Parents are concerned at the effects of the busing on their children. At a recent meeting, which branch committee members of the National Union of Agricultural Workers, centre tutor Bill Goodhand and myself found that

were witness to his vehement telling off, and to his continued unabashed glee. Visitors take their cue from staff and pupils. Nobody turns a hair at the occasional strange noise or inappropriate comment in assembly, so visitors do not either.

In their own classroom, children have their own individual language programme as well as general activities. Two cannot talk at all, and understand very little. One of these is learning the Page-Governor Sign System, and can now use between 30 and 40 signs appropriately. The other is following a programme which concentrates on understanding and simple imitation of sounds.

Chris Kiernan is deputy and senior research officer at the Thomas Coram Unit, University of London. Shirley Harries is research officer at the Thomas Coram Unit, University of London.



Art of the impossible?

Leonard argues that work of the Assessment of Performance Unit is being damaged by external political pressures, that its attempt to monitor national standards and sensitivity is to fail

Assessment of Performance Unit was set up in 1974, under the leadership of Brian Kay, HMI. Its terms of reference include both assessment in the identification of underachievement. However, as public attention has moved towards standards and the alleged decline, so the work of the unit has concentrated on the monitoring and assessment of standards.

They may, of course, know all too clearly that they are attempting the impossible, but have been unable to resist the strong external pressure on them. There is no doubt that this pressure exists: the time scale for the national monitoring programme in mathematics, for example, has evidently been decided outside the unit, even though it must be obvious to all concerned that the development work cannot be completed by the target date of 1978.

The Yellow Book gives an indication of the pressure on the unit to produce results, and Shirley Williams's address to the North of England Conference provides further confirmation. However, even if the origin of the unit's problems is in higher places, the professional responsibility is their own.

Although the unit has some good ideas on sample design, it does not seem to recognize the extent of the statistical and administrative problems involved in sampling. Decisions have to be made on such matters as sample size, the balance between the two stages (school and individual), and the safeguards needed to avoid biased errors.

These decisions are not as straightforward as might appear: each must be based on sound statistical advice, given by someone to whom a standard error is as familiar as an arithmetic mean. At present the unit has a statistics advisory committee, but has no one who can give advice at the level required on a day-to-day basis.

There are further indications of a lack of statistical awareness on the subject of test design. The unit apparently intends to use the Rasch method of item analysis. This will be a powerful tool, when fully tested. But one of its limitations is that a given bank of questions can only measure a skill which has a unidimensional scale of difficulty.

Martin Leonard is I.e.a. schools inspector for Walsall, with special responsibility for mathematics.

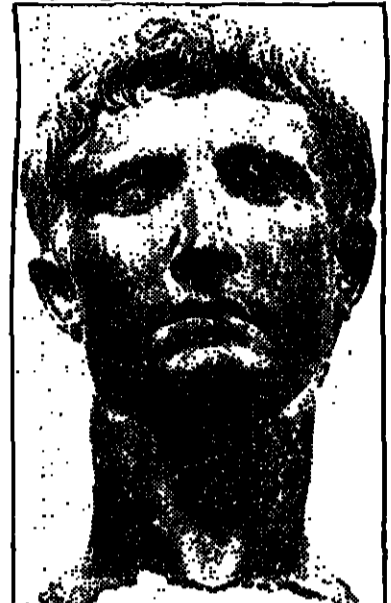






The emperor as institution

Ian Caruana
The Emperor in the Roman World by Fergus Millar. Duckworth £15.00. 7156 0951 3.
The appearance of The Empire in the Roman World is an event of great importance for the study of the ancient world. It is astonishing that, after centuries of serious study of Roman history, only now does a work emerge which treats in detail the way that the emperor functioned as an institution. Not all that Fergus Millar covers in any sense new ground, but what is so important is that he has assembled facts previously recovered to create a picture of what the emperor actually did—not what policies were followed by him or that in general, but how issues came up for attention, and how decisions were reached.
Roman history divides into a number of broad periods characterized by different modes of government. In the early empire, to 377 Millar's field there is a curious reconciliation to the reality of monarchy by men who during the Republic were total in their opposition to it. They do, however, maintain their implacable hostility to its language. A crack would freshly acknowledge his master as king. The Latin speaker, however, heisted on the political language of republican institutions. And yet there is no hint of challenge to the constitutionality of the emperor's actions either within the chosen forms or when he ignored them. The only possible challenge was that of assassination.
More significant is that this disguised Roman kingship had channels which brought petitions for justice, largesse and appointments in various forms to the emperor and returned decisions, answers



Emperor Augustus—An illustration from 'The Roman World'.

and gifts to the petitioners. The emperor was the focus for the operation of society. Dispensing justice was a key imperial function. However, in a state where wealth came mainly from land, the emperor could intervene decisively in its distribution and use, not primarily through taxation, but by the use of private imperial resources and by the giving and receiving of gifts.
There is no quarrelling with its essential validity. My one reservation about this aspect of the work is that his evidence does tend to emphasize the normal functioning of the apparatus. It should not be forgotten that there were certain emperors who did try to intervene decisively to make changes in the way that things worked.
It is more disturbing that Millar deliberately leaves aside the role of the emperor as a military leader. While it is no doubt true that conventional military decisions could be taken on a purely reactive basis, there was scope for military initiatives. Perhaps more significant is that, in terms of resources and time, military affairs were probably the most important single aspect of Roman life. There should be a complementary volume on the emperor as general to give a more balanced picture. But there is no doubt that this is a work of profound importance for understanding the early empire.

Power to harm others

Elizabeth Henry
Greek Festivals. Folder 5, 1977. Cambridge Schools Classics Associates.
The festivals described in the book are mainly dramatic, athletic; although some musical contests and the Isthmian Mysteries, the latter almost entirely concerned drama or the games of Greece. Inevitably, the book is predominantly Athenian, but should correct the impression (often current) that Athens was the "capital" of a "country" Hellenia. Some teachers may feel that the omission of Panathenaic procession and festivals of Athens is a little more than they deserve. A teacher requires frequent links with earlier Cambridge Polders, of IV (Athens, Sparta, and...
Format and style follow the previous Polders. The facts are set out in a strong case about the subjects which are hard to come by. The details of the Greek world are covered in a way which is both interesting and useful. There are numerous illustrations and drawings in monochrome. The book includes a bibliography, a glossary, and a list of references. It is a good reference work for the teacher and the student alike.
Curious, of course, are commoner in Hardy's world than blessings of any kind. But if Destiny and Blue Cloak (another previously uncollected story) smacks a little too easily of that coincidental Divergence of the Twin that so hounds Hardy's lovers, I must nevertheless conclude (having dived up again to volume 1 and The Withered Arm) that an understanding of our short power, erudite in the mind, to have others, is what gives Hardy's best tales their anything but superficial charms, their chilly profundity.

Sanskrit for all?

Jonathan Katz
Sanskrit: An Introduction to the Classical Language. By Michael Coulson. Teacher and Student (Teach Yourself series) £2.95. 340 05982 6.
Many enthusiastic linguists have been deterred from the study of Sanskrit by an apprehension of its extreme difficulty and inaccessibility. This latest language addition to the "Teach Yourself" series should do much to bring Sanskrit within the reach of a wider public which it richly deserves. The great masterpiece contains many...
Sanskrit studies have for some time been moving away from the purely linguistic side, and in this changing climate an introductory primer which concentrates on an appreciation of the literature will be particularly welcome. On the other hand, a more comprehensive and philological primer is not entirely absent; in dealing with the paradigms and phonology Coulson offers some clear explanations of forms both in terms of Western and native Indian linguistics. He is careful to aim these explanations at students who have not necessarily had any previous experience of such technical language.
The beginner will encounter two main difficulties, the script and the

phenomenon of "sandhi"—the process by which letters at the ends of words and within these change according to rules of euphonic combination. Both these problems are dealt with in the first two chapters, and there are exercises and a constant check on his accuracy. All the examples and exercises are given both in Devanagari and in Roman transliteration, and the former can be picked up gradually as one advances.
Coulson does not labour grammatical obscurities, and the treatment of style and idiom is arranged so as to facilitate as early an understanding of literary Sanskrit as possible. The syntax of the classical language is in fact very simple, and it is surely right that the learner should be told what the authors did actually write rather than what they might have written; the book is refreshingly realistic about the simplicity of normal Sanskrit usage. However, all the forms can be found in the grammar section and full vocabularies are provided.
Two sections are especially worthy of mention. The scholarly and admirably clear introduction gives what is probably the best available elementary description of the history of the interpretation of Sanskrit commentaries; these are sometimes indispensable for the understanding of classical texts and are treated in a special idiom for which the help here offered will be extremely valuable.
A highly successful textbook, written in a direct and often entertaining style, Teach Yourself Sanskrit is in use at various universities, and is already supplementing the classical curriculum at Westminster School. It is unlikely to be superseded for a very long time.

Among this week's contributors:
Peter Hebblethwaite is the author of The Runaway Church. John Sutherland teaches at University College London. David Wright's most recent book is The Penguin Book of Everyday Verse.
Seamus Hegarty is a research officer at the NFER. Brian Osman is an educational psychologist. Richard Taves teaches at the School of Oriental and African Studies. Elizabeth Henry teaches at Notre Dame Grammar School, Blackburn.

PROMPT/PLAYBILL Two drama anthology series edited by Alan Durbard. Now available. Prompt One: A Day in the Mind of Tich Oldfield by Alan England. Prompt Two: Speech Day by Barry Hines. Prompt Three: They Don't All Open Men's Boutiques by Willis Hall.

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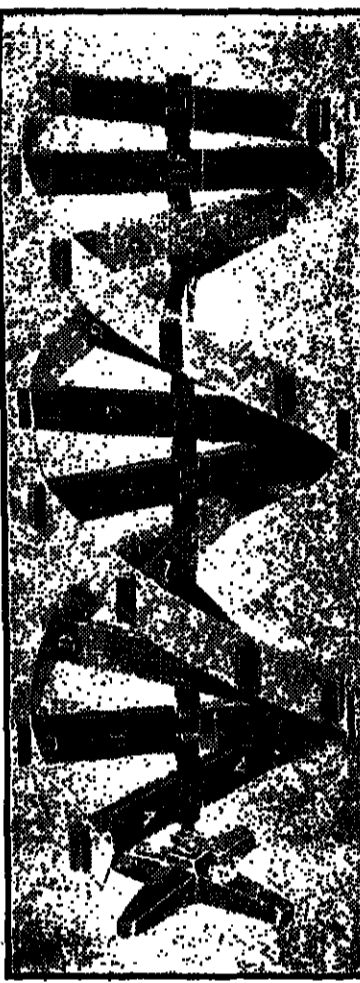
Science

Commissioned by Chelsea College Centre for Science Education

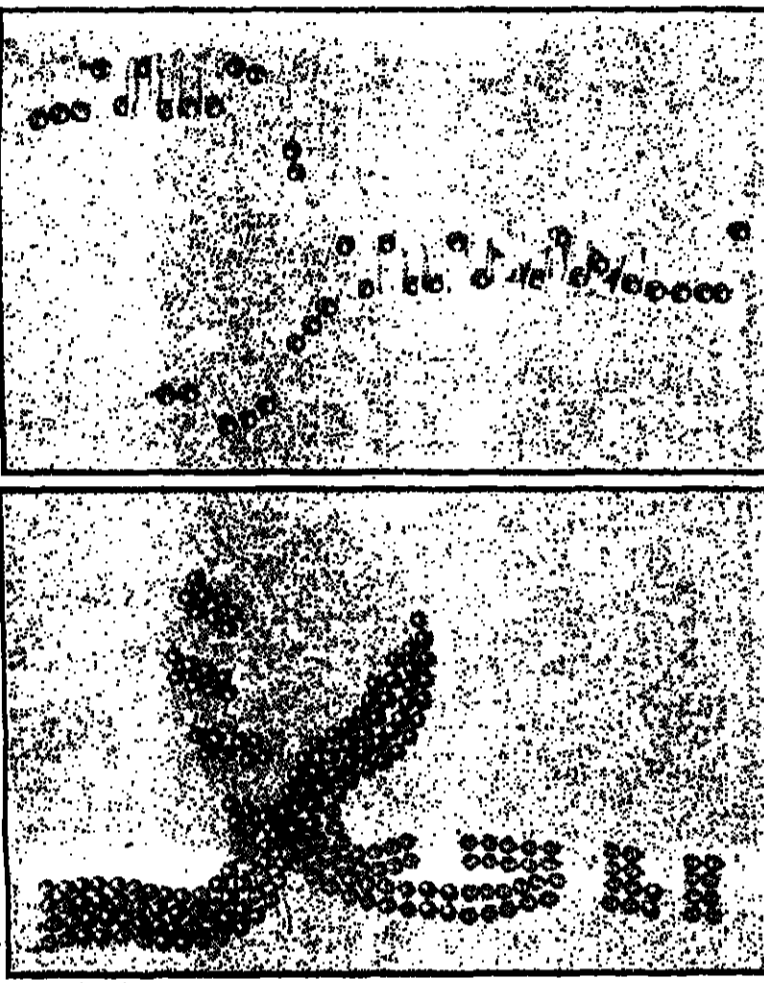
Constructions on DNA

John Tranter assesses models for the study of genetics

Now that aspects of physiology, genetics and molecular biology are found in most biology syllabuses, there has developed a need for models of various molecules of biologically important compounds such as nucleic acids, proteins, carbohydrates, etc.
These can make the task of teaching about the structure and property of such molecules much easier by presenting a three-dimensional representation which can be more readily appreciated by students who are frequently bemused by theoretical explanations supported only by two-dimensional diagrams.
Biological molecular models fall into two broad categories: those which do not attempt to represent individual atoms of the molecule with accurate sizes, dimensions and bond angles, and those that do.
A model that comes into the first category is supplied by T. Gerrard and Co. This is the Staco built-in DNA molecule model from Science Teaching Aids in the United States. The model is immaculately packaged in a sturdy case with full assembly instructions. It consists of two supporting stands and rods on to which the DNA molecule is assembled.
Colour-coded, interlocking plastic pieces represent the molecules of deoxyribose and nucleotide bases. At one end of each piece is an orange section for deoxyribose and the remaining parts are coloured red, green, blue or yellow to represent adenine, thymine, cytosine or guanine.



Above left: Gerrard's Staco DNA molecule model



Top right: Harris Gene Kit, showing DNA structure and replication

Above right: Harris Gene Kit: Chromosome inversion

Phillip Harris Biological supply the Biobits range of models produced by Capital Biotechnic Developments Ltd. Of interest to biologists in schools and colleges are the two kits for the construction of Nucleic Acid and Protein Biobits models. In both kits the backbones of the molecules—i.e. sugars and phosphates in DNA and RNA and amino acids in proteins—are represented by flexible, colour-coded, PVC tubing reinforced with wire and punched at intervals with small holes.
The pyrimidine and purine bases in nucleic acids and R-groups in proteins are represented by Biobit plastic shapes of various colours and sizes. They all carry a small "prong" at one side so they can be pushed into the holes in the PVC backbones of the molecule.
In RNA and DNA molecules, the base bits are joined together by lengths of coloured, plastic-coated wire to represent hydrogen bonds. Having constructed a "ladder" of bases and two backbones, the double helix of DNA and RNA is obtained by twisting the flexible structure into shape.

The Nucleic Acid Kit can be used to construct DNA & RNA double helix molecules, a transfer RNA molecule and also to show mutation, replication and transcription of the DNA "message" into RNA. The Protein Kit allows the construction of a variety of protein molecules including the beta-chain of haemoglobin. The various pieces in the two kits are neatly housed in a plastic case with numbered compartments and an instruction booklet which gives details for the assembly of the models.

The Harris Gene Kit has been developed from the ideas of Dr D. J. Heath, of Essex University, who has written an extensive book on genetics. The kit is designed for use by teachers or students through the use of the beads. Its potential is enormous: the main attraction being that it can demonstrate so many different things.
To construct a model of DNA, supporting rods and plastic "hydrogen bonds" are used. Here the DNA structure is modelled very simply; the four nucleotide bases represented by the different colours

of beads. The basic double helix structure is quickly constructed and the model can then easily be used to show replication, transcription into RNA and protein synthesis (using the model amino acid units supplied).
As a chromosome model, the kit suggests ways in which the beads can show the essential features of chromosome structure, mitosis and meiosis, chromosome behaviour in various genetic crosses, and chromosome mutations such as inversions, deletions and translocations.
The notes suggest how genetic crosses can be investigated to demonstrate the behaviour of genes at unlinked, autosomally-linked and sex-linked loci in gene pool models of inheritance. For population genetics, the beads are used to show the Hardy-Weinberg law, selection against dominant and recessive alleles, and random genetic drift. The kit is best used by students working on their own or in small groups and there is sufficient material provided for this. The teaching notes are clear and well written and the suggested activities easy to follow. The use of the beads to model nucleic acids is particularly useful. The basic idea of the form of DNA and RNA and the way in which these molecules function can be easily appreciated without students being confused by full representations of these nucleic acids. The only danger is that the gene kit could encourage a too simplistic view of nucleic acid structure.
The use of the gene kit to model chromosomal mutation and structure and behaviour in cell division and genetic crosses is an interesting development and a successful one. The entire kit is a most welcome addition to the teaching materials available to biologists.
In the second category of models—those representing individual atoms and bonds—there is a large variety of systems to choose from. One of these is supplied by Spring Enterprises Ltd, who offer the MolyMod system of molecular models. Among many types of model that are available in this range are those for DNA, alpha-helix, polypeptides, amino acids, fat, starch, glucose and sucrose. These can be supplied already assembled or as do-it-yourself kits which are cheaper. The models can be obtained in two forms: space-filling or open-type skeletal structures.
The atoms of different elements are represented by plastic balls of various colours and these are cut large (from about 1.5 to 2.5 cm in diameter). Bonds between atoms are achieved by means of flexible plastic links, also of different colours for different types of bonds. In the various models the kit form, all the atom units and links necessary to make the required structures are supplied in plastic bags with an instruction leaflet. Assembly is easy and once completed the models are flexible but fairly rigid. In the DNA model sufficient atoms and links are provided to build two base pairs plus accompanying "backbone" of deoxyribose and phosphate molecules. If a larger portion of the DNA molecule is needed, more than one DNA kit could be purchased and linked together.
This larger model would, however, need additional support and it would be difficult and expensive to show the DNA double helix structure with the MolyMod system. Generally, the MolyMod models are attractive and effective representations of biochemical molecules.
Another "skeletal" system is the Orbit Molecular Building System from Cochranes Ltd (also supplied by Philip Harris). The Orbit system uses small plastic atom centres with various peg-like projections which permit a variety of bonds and bond angles. They are all colour-coded according to element and classified on a letter system so that assembly of molecules is made easier. The atom centres are joined together with plastic tubes cut to various lengths between 1.5 and 5 cm.
Three types of sets are available in the Orbit system. There is a teachers' set which can be used for making large molecules of all types.

Continued on next page













SECONDARY Geography continued

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Scale 1 Posts
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The WASHINGTON HIGH SCHOOL
London Borough of Sutton

HEREFORD AND WORCESTER

HEREFORD AND WORCESTER
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

HAMPSHIRE

HAMPSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

LEICESTERSHIRE

LEICESTERSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

TRAFFORD

TRAFFORD
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

Scale 1 Posts

Scale 1 Posts
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

Scale 1 Posts

Scale 1 Posts
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

LEICESTERSHIRE

LEICESTERSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

HERTFORDSHIRE

HERTFORDSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

LEICESTERSHIRE

LEICESTERSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

LEICESTERSHIRE

LEICESTERSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

WARWICKSHIRE

WARWICKSHIRE
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

Scale 1 Posts

Scale 1 Posts
LONDON BOROUGH OF SUTTON
The WASHINGTON HIGH SCHOOL
London Borough of Sutton

EXTRA CHILDREN'S BOOKS

Grimm's tales: strange familiars

Marion Glastonbury on a new edition of an old favourite

Household Tales. By the Brothers Grimm. Illustrated by Mervyn Peake. With an introduction by Russell Hoban. Pp/Placidor: £1.50, 0 330 25036 1

plering gaze of Peake's creatures goes on penetrating long after the book is closed: "Who do you come for?" "For YOU!"



Mervyn Peake's illustration for 'The Little Peasant'.

Things that go bump in the night

David Self on short stories

Twelve Minutes to Disaster. By Arthur Catherall. Pp/Placidor: £1.50, 0 330 25036 1

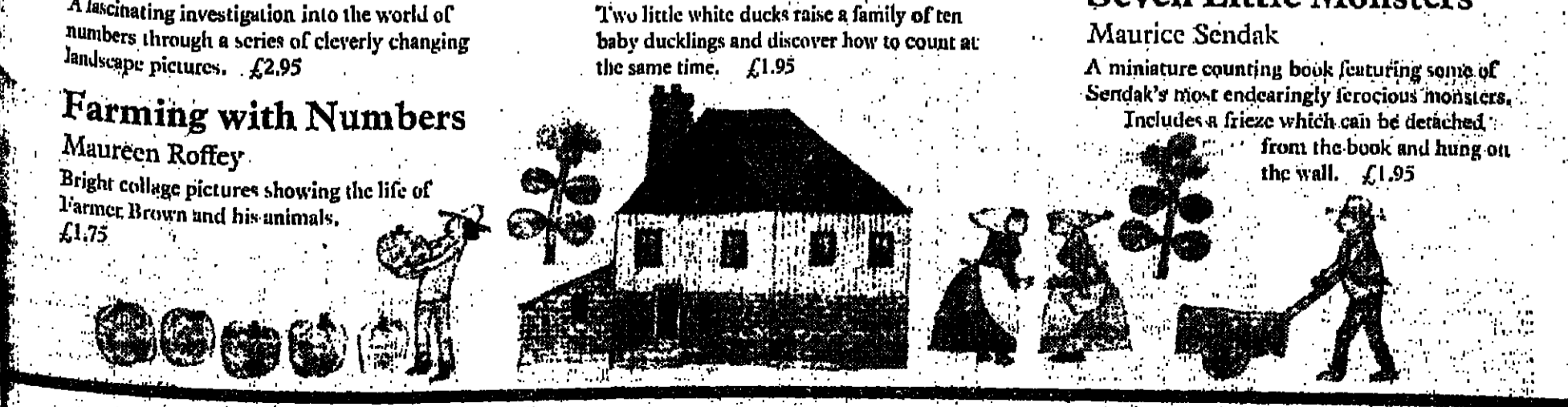
that even good short stories leave many young readers hungry. They prefer to consume one sustaining and filling novel rather than a succession of delicacies, however finely and intricately they are prepared.

Learn to count on a Bodley Head picture book

Anno's Counting Book. Mitsumasa Anno. A fascinating investigation into the world of numbers through a series of cleverly changing landscape pictures. £2.95

Two Lonely Ducks. Roger Duvoisin. Two little white ducks raise a family of ten baby ducklings and discover how to count at the same time. £1.95

Coming in August. Seven Little Monsters. Maurice Sendak. A miniature counting book featuring some of Sendak's most endearingly ferocious monsters. Includes a frieze which can be detached from the book and hung on the wall. £1.95



Other Posts on Scale 2 and above

Scale 1 Posts

Scale 1 Posts



Tell me where is fancy bread? At Faber



Cecilia H. Hinde Your Book of Breading Making Even beginner cooks can bake bread successfully using these detailed instructions...

P. J. G. Ransom Your Book of Canals Canal holidays are increasingly popular, and this book tells the story of canals throughout the British Isles...

Kate Pountney Creative Crafts for Children Clear instructions are given for the basic techniques of eight crafts: rubbings, tie and dye, plaster casting, modelling with papier mache...

Audrey Vincente Dean Make a Prehistoric Monster Make an Iguanodon money box, a Plesio-saurus bath toy or a glittering Glyptodon to take for walks!

Jean Chissell Brahms The latest addition to the "Great Composers" series combines biographical facts with music examples, and is illustrated with drawings and photographs.

Water de la Mare Stories from the Bible A Bible for children who are interested in a Faber Paperback, with the original drawings by Edward Ardizzone.

Alison Abel & Shirley Hughes Make Hay While the Sun Shines A Book of Proverbs Drawings full of humour and imaginative detail reinforce the meanings of these familiar proverbs...

Gene Kemp The Turbulent Term of Tyke Tiler Life, thought Tyke could be very unfair, when you had a friend like Danny, angelic-looking, well-meaning but not too bright...

Gold, books and slaves Barbara Smith on Toppers

The Gold Diggers. Planned by Belinda Hollyer. Written by Belinda Hollyer and Vivienne Driscoll. Macdonald Educational £1.50. 356 05444 6.

The Slave Trade. Planned and written by Belinda Hollyer. Macdonald Educational £1.50. 356 05445 4.



Scotch is sad, what'er his for... Oh, why should men delight in war! This soldier is one side of a Victorian changing picture depicting War and Peace.

Macdonald Educational have added three titles to their "Toppers" history series. Each book contains the history of a specific topic and is obviously designed with project work in mind...

The Story of Books follows the history of the book, production and printing. A considerable quantity of information is imparted, though again there is often a lack of time scale and the task of explaining complex modern printing processes simply and briefly is not accomplished...

A noteworthy point: the West Indies drop conveniently from view in the latter part of the book, doubtless to save embarrassment about one section of our school population, but thereby ducking the issue.

Scrutiny The idea behind this book is excellent: to sell to the young naturalist the merit of using the simple hand lens.

After five years and over 80 titles, Franklin Watts's successful First Look Books are still going strong. The format of this series for seven to nine-year-olds remains the same...

The 50 "adventures" taken, individually written in an easy style, do not seem to follow any logical pattern. Many of the drawings achieve excellence by being stripped to the utmost simplicity.

In a field of natural history, so sparsely covered, this book has fallen short of what could have been achieved.

Transcending frontiers Henry Pluckrose

Let's Find Out About... Babies. By Martha and Charles Shipp and Sylvia Shepard. 85166 580 2.

International editions have become the bread and butter of many publishing houses—an observation which applies so much to school books as to sophisticated editions on fine art, religion and philosophy.

The "Let's find out" books, published in Britain by Franklin Watts (who had previously published them in the United States), provide an example of the problems that have to be resolved.

Sticky subjects Rosemary Hartill

First Look Books. Honey. By Sarah Munro. 85166 625 1.

Both Bee and Honey include much less delightful honey, which is clear and simple, the text is clear and simple, and the design looks highly professional.

The author has a gift for choosing not only important facts but interesting ones too. Not many books on honey, for instance, tell you that it is produced inside baggies to make the leather soft and supple.

The smell of the grease paint... Donald Walker

Fun with Stagecraft. By Andrew McCallum. Kove and Ward £2.15. 7182 0098 5.

The fascination and satisfaction to be found in backstage techniques cannot be overemphasized; once hooked, many a young person will leave mere play-acting to the less inspired.

He rightly feels the need to set the "scene" in its historical background, though his necessarily cursory account remains unhelpful to the chapter before he is mentioned.

Another confusion (and one which will rapidly discourage the younger readers) is the author's habit of using theatre terms familiar enough to himself but not defining them until a later page...

Anyone who has run a junior theatre club appreciates the need for economy, speed and quick effect when staging a play with children.

All sewn up Meana Wallington

Creative Crafts for Children. By K. Pountney. Faber £2.95.

Weaving in Easy Steps. By H. Chestwynd. Soft Toys, Dolls and Puppets in Easy Steps by I. Gray. Studio Vista £2.25 each.

Fingertips Soft Toys. By Elsie Wrigley. Frederick Warne £1.20 each.

The first of these books is the most expensive, but the most pre-emptive title and is the least valuable and least popular of the five.

Craft cuteness Phoebe Latham

Easy Craft Series. 8 volumes by Maurice Goppin, Jeannine Janvier, Claude Morin, Claude Nasset, and Genevieve Plouffe. Distributed by Ward Lock £2.50 each.

One would have thought the egg-box/roll-tube vein had been exhausted long since, but these eight hardbacks, of 32 pages each, have many new suggestions for things to make.

From Denmark, via the United States, comes an enjoyable book on how to do all these things. Even within one Saturday morning session there are lots of things that quite young children can achieve entirely alone...

Perhaps the least satisfying section is that on make-up; it is a pity that the photographs emphasise the crudity so common in attempts to make up young faces.

CHRISTOBEL MATTINGLEY NEW PATCHES FOR OLD

This distinguished Australian author tackles a major theme in her first longer book—the difficulties of emigration across the world for a girl who is also experiencing difficulties in growing-up.

SEAN MCCANN THE GOLDEN GOAL The third football book about Georgie Goode, the gipsy who is a natural player.

ILLUSTRATED TEACH YOURSELF TENNIS TOM RAVENSDALE £1.80 net

An explanation of the essentials—the rules, how to hold the racket correctly, and the basic strokes, aimed at those new to the game.

BARBARA SLEIGH AND WILLIAM MAYNE CHARLIE CHUMBLER AND PARTY PANTS

First reading books for young children. Super simple stories for children who can just read.

Stepping Stones (cased) £1.20 net each. Colour Knight (paperback) 60p net each.

Hodder & Stoughton

read it your self

6 NEW story books from Ladybird GOLDILOCKS AND THE THREE BEARS BILLY GOATS GRUFF — THREE LITTLE PIGS RED RIDING HOOD — GINGERBREAD MAN JACK AND THE BEANSTALK

All children have a great ambition to read to themselves, and a sense of achievement when they can do so. The Ladybird Key Words Reading Scheme has been devised to satisfy their ambition.

Incredibly still only 24p

LADYBIRD BOOKS Ltd PO Box 12 Loughborough Leicestershire LE11 2NQ

Starting Points Here are the latest additions to this most popular series Let's Sew Dora Wigg and Catherine Topham A collection of ideas which will encourage boys and girls to try their hand at sewing.

50211 50211



















**SECONDARY Physical Education continued**

**HERTFORDSHIRE COUNTY COUNCIL NORTH HERTS DIVISION**

**THE MIDLANDS HOAGS**  
115 East Street, Hemel Hempstead, Herts. HX1 1AA

Well qualified TEACHER for Boys' Physical Education. Salary £1,100 per annum plus 10% bonus.

**HERTFORDSHIRE COUNTY COUNCIL NORTH HERTS DIVISION**

**THE MIDLANDS HOAGS**  
115 East Street, Hemel Hempstead, Herts. HX1 1AA

Well qualified TEACHER for Boys' Physical Education. Salary £1,100 per annum plus 10% bonus.

**City of Manchester Education Committee**

Unless otherwise stated all posts are available from September, 1977, and application forms, together with further particulars are obtainable from the Head of the school to whom they should be returned by 1st July, 1977.

**DEPUTY HEADTEACHER**

**PLANT HILL HIGH SCHOOL**  
Plant Hill Road, Stockport, Manchester, M16 2WP

1200 mixed. For January, 1978. — DEPUTY HEADTEACHER (Group 10).

**DEPUTY HEADTEACHER**

**PLANT HILL HIGH SCHOOL**  
Plant Hill Road, Stockport, Manchester, M16 2WP

1200 mixed. For January, 1978. — DEPUTY HEADTEACHER (Group 10).

**SCALE 4**

**MORTON BROOK HIGH SCHOOL**  
Morton Brook Road, Manchester, M16 9AB

11-18 boys comprehensive school of 1100. For January or sooner if possible. Head of SCIENCE department, vacant due to promotion of holder to a deputy headship. Applications are invited from experienced teachers with a degree in science and a minimum of 5 years' experience to lead and co-ordinate the work of the large science department. The successful candidate will be responsible for the development of materials and opportunities for independent learning to be an advantage. Closing date: 24 June, 1977.

**SCALE 4**

**MORTON BROOK HIGH SCHOOL**  
Morton Brook Road, Manchester, M16 9AB

11-18 boys comprehensive school of 1100. For January or sooner if possible. Head of SCIENCE department, vacant due to promotion of holder to a deputy headship. Applications are invited from experienced teachers with a degree in science and a minimum of 5 years' experience to lead and co-ordinate the work of the large science department. The successful candidate will be responsible for the development of materials and opportunities for independent learning to be an advantage. Closing date: 24 June, 1977.

**SCALE 3**

**POWDSICHA HIGH SCHOOL**  
Swarley, Huddersfield, W. Yorkshire

1,200 mixed. For September or 6th Form. Required for September or 6th Form. Graduate TEACHER OF FRENCH to be Second in the Modern Languages Department with responsibility for French throughout the school, working to the Head of Modern Languages.

**SCALE 3**

**POWDSICHA HIGH SCHOOL**  
Swarley, Huddersfield, W. Yorkshire

1,200 mixed. For September or 6th Form. Required for September or 6th Form. Graduate TEACHER OF FRENCH to be Second in the Modern Languages Department with responsibility for French throughout the school, working to the Head of Modern Languages.

**SCALE 2**

**ABRAHAM MOSS CENTRE**  
Crescent Road, Manchester, M16 2BB

Teacher of SCIENCE to lead the department in teaching integrated Science in the 1st and 2nd years of the 11-16 school. Experience of an interest in the development of materials and opportunities for independent learning to be an advantage.

**SCALE 2**

**ABRAHAM MOSS CENTRE**  
Crescent Road, Manchester, M16 2BB

Teacher of SCIENCE to lead the department in teaching integrated Science in the 1st and 2nd years of the 11-16 school. Experience of an interest in the development of materials and opportunities for independent learning to be an advantage.

**HERTFORDSHIRE COUNTY COUNCIL SOUTH HERTS DIVISION**

**WATFORD HIGH SCHOOL**  
1100 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.

**HERTFORDSHIRE COUNTY COUNCIL SOUTH HERTS DIVISION**

**WATFORD HIGH SCHOOL**  
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**Schools Prom**

The most exciting annual event in school music!

November 28 and 29 1977 at 7 p.m.

at the Royal Albert Hall

The Schools Prom concerts are a unique demonstration of the scope and quality of school music in Britain, by performers selected from the National Festival of Music for Youth in July.

Different schools will appear each evening and different works performed, though the variety and range of music played will be the same.

For further details please write to the TES Schools Prom, Room 256, Times Newspapers Limited, New Printing House Square, Gray's Inn Road, London WC1X 8EZ

The Schools Prom is sponsored and presented by The Times Educational Supplement

**SECONDARY Physical Education continued**

**CITY OF SALFORD EDUCATION DEPARTMENT**  
25, ANDREW'S PLACE, HIGH STREET, SALFORD, M6 6PU

1,200 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.

**CITY OF SALFORD EDUCATION DEPARTMENT**  
25, ANDREW'S PLACE, HIGH STREET, SALFORD, M6 6PU

1,200 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.

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25, ANDREW'S PLACE, HIGH STREET, SALFORD, M6 6PU

1,200 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.

**ESSEX COUNTY COUNCIL**

**WYVERN SCHOOL**  
Weyvern, Basildon, Essex. SS11 3BN

1,200 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.

**ESSEX COUNTY COUNCIL**

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**Other Posts on Scale 2 and above**

**BARNET EDUCATION DEPARTMENT**  
115, HIGH STREET, BARNET, Herts. SG5 2AB

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**HERTFORDSHIRE COUNTY COUNCIL SOUTH HERTS DIVISION**

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1100 mixed. For September 1977. — TEACHER OF PHYSICAL EDUCATION. Salary £1,100 per annum plus 10% bonus.





SECONDARY
NORFOLK COUNTY COUNCIL
EDUCATION DEPARTMENT
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NORFOLK COUNTY COUNCIL
EDUCATION DEPARTMENT

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NORFOLK COUNTY COUNCIL
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NORTH HAMPSHIRE
COUNTY COUNCIL
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COUNTY COUNCIL
EDUCATION DEPARTMENT

London Borough of
RICHMOND UPON THAMES
SHEEN SCHOOL
Park Avenue, East Sheen, SW14 8RG

London Borough of
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Park Avenue, East Sheen, SW14 8RG

YSGOL PENGLAIS, ABERYSTWYTH
(Ysgol Ddeuryl, Gytun 1, 200 Dygwyl)
Gwaliodor Cwladfa am ysgol gynnydd at yr Ieol Medd

PEMBROKE SCHOOL
Required for either September 1977, or January 1st, 1978, a
Head of the Music Department, Scale 2.

LAMPETER COMPREHENSIVE SCHOOL
Lampeter, Dyfed (Group 9)
Required for the 1st September, 1977 -

ST. MARY'S R.C. PRIMARY SCHOOL (VOLUNTARY
AIDED)
Application forms should be sent to the Head Teacher at
St. Mary's R.C. Primary School, 10, St. Mary's Lane,
Llanelli, Dyfed

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

Lancashire
County Council
CLOSING DATE 27th JUNE 1977
PRIMARY AND SPECIAL SCHOOLS

SECONDARY SCHOOLS
HEADS OF DEPARTMENTS
GREAVES COUNTY SECONDARY SCHOOL (800 on roll, 11-16 Mixed
secondary)

SCALE 1 POSTS
CANNFORTH HIGH SCHOOL (800 on roll, 11-16 comprehensive)
Kilford Road, Cannorth

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

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GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

SURREY
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FRINGE AREA LONDON ALLOWANCE £150 p.a.
THROUGHOUT THE COUNTY.

COMPREHENSIVE
GUILDFORD COUNTY (Re-organising from
Girls Grammar to Mixed Comprehensive.
First Intake as such, September, 1978)

MATHS teacher required to take subject to CSE and
"O" level in this 12-16 school.
Telephone: Esher 83002 & 83473.

FARNHAM, HEATH END COUNTY
SECONDARY
SCIENCE teacher required. Some MATHEMATICS, S.M.P.
an advantage. Telephone: Farnham 8588.

GUILDFORD, GEORGE ABBOT SCHOOL
BIOLOGY teacher required to take subject at all levels
including a considerable share of VI Form work. Good
laboratory facilities.

DORKING, THE ASHKMOOR SCHOOL
CHEMISTRY graduate teacher required.
PHYSICS graduate teacher required.
ENGLISH graduate teacher required.

ESHER, WAYNEFLETE SCHOOL
WOODWORK teacher required to take subject to CSE and
"O" level in this 12-16 school.

FARNHAM, HEATH END COUNTY
SECONDARY
SCIENCE teacher required. Some MATHEMATICS, S.M.P.
an advantage. Telephone: Farnham 8588.

GUILDFORD, GEORGE ABBOT SCHOOL
BIOLOGY teacher required to take subject at all levels
including a considerable share of VI Form work. Good
laboratory facilities.

MATHS teacher required to take subject to CSE and
"O" level in this 12-16 school.
Telephone: Esher 83002 & 83473.

NORTH HAMPSHIRE
COUNTY COUNCIL
EDUCATION DEPARTMENT
NORTH HAMPSHIRE
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NORTH HAMPSHIRE
COUNTY COUNCIL
EDUCATION DEPARTMENT

SOMERSET
WILTON SCHOOL
Wilton, Somerset
Application forms should be sent to the Head Teacher at
Wilton School, Wilton, Somerset

STAFFORDSHIRE
EDUCATION COMMITTEE
COMPREHENSIVE SCHOOL
Walsley, Staffordshire

STAFFORDSHIRE
EDUCATION COMMITTEE
COMPREHENSIVE SCHOOL
Walsley, Staffordshire

STAFFORDSHIRE
EDUCATION COMMITTEE
COMPREHENSIVE SCHOOL
Walsley, Staffordshire

STAFFORDSHIRE
EDUCATION COMMITTEE
COMPREHENSIVE SCHOOL
Walsley, Staffordshire

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

London Borough of
RICHMOND UPON THAMES
GREY COURT SCHOOL
Ham Street, Ham, Richmond, Surrey TW10 7HN

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Ham Street, Ham, Richmond, Surrey TW10 7HN

SECONDARY Science continued
WAKEFIELD (City of) COLLEGE
WAKEFIELD (City of) COLLEGE
WAKEFIELD (City of) COLLEGE

WEST SUSSEX COUNTY COUNCIL
WILTSHIRE COUNTY COUNCIL
WILTSHIRE COUNTY COUNCIL

WIRRAL METROPOLITAN DISTRICT
WIRRAL METROPOLITAN DISTRICT
WIRRAL METROPOLITAN DISTRICT

WOODWORTH METROPOLITAN DISTRICT
WOODWORTH METROPOLITAN DISTRICT
WOODWORTH METROPOLITAN DISTRICT

WORCESTER METROPOLITAN DISTRICT
WORCESTER METROPOLITAN DISTRICT
WORCESTER METROPOLITAN DISTRICT

WORCESTERSHIRE COUNTY COUNCIL
WORCESTERSHIRE COUNTY COUNCIL
WORCESTERSHIRE COUNTY COUNCIL

WYOMING COUNTY COUNCIL
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YORKSHIRE COUNTY COUNCIL
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YORKSHIRE COUNTY COUNCIL

CITY OF BIRMINGHAM Education Department COUNTY SECONDARY SCHOOLS SCALE 1 POSTS

Unless otherwise stated, requests for application forms for Scale 1 posts should be sent immediately, together with a stamped addressed envelope, to Head of School, as soon as possible, together with the names of two referees and a stamped addressed envelope, to Head of School, as soon as possible...

Avon County District Council
Avon County District Council
Avon County District Council

Buckinghamshire County Council
Buckinghamshire County Council
Buckinghamshire County Council

Cambridgeshire County Council
Cambridgeshire County Council
Cambridgeshire County Council

Derbyshire County Council
Derbyshire County Council
Derbyshire County Council

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Derbyshire County Council

Derbyshire County Council
Derbyshire County Council
Derbyshire County Council

BIRMINGHAM CITY COUNCIL DEPARTMENT OF EDUCATION LEEDS CITY COUNCIL DEPARTMENT OF EDUCATION





SPECIAL EDUCATION Scale 1 posts continued

REMOVAL OF SENIOR TEACHERS... CLAUDIA HALL SCHOOL, Hampshire...

ASSISTANT TEACHERS... ASSISTANT TEACHER (non-teaching) for September 1977...

SURREY ST. MARY'S SCHOOL... ASSISTANT TEACHER (non-teaching) for September 1977...

WALTHAM FOREST EDUCATION COMMITTEE... ASSISTANT TEACHER (non-teaching) for September 1977...

WILTSHIRE WESTWOOD GROUP... ASSISTANT TEACHER (non-teaching) for September 1977...

INDEPENDENT SCHOOLS HEADSHIPS... SURREY PLAYERS SCHOOL, Surrey...

Remedial Posts

SOMERSET MILLFIELD SCHOOL... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Art and Design... ASSISTANT TEACHER (non-teaching) for September 1977...

Classics... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

Commercial Subjects... ASSISTANT TEACHER (non-teaching) for September 1977...

Economics

WEST MIDLANDS... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

English... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

CHESHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

EAST SUSSEX... ASSISTANT TEACHER (non-teaching) for September 1977...

Geography

HERTFORDSHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

DUMBARTON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

History

HERTFORDSHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Mathematics

AVON COUNTY... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Music

HERTFORDSHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Science

KINGSTON UPON THAMES... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Technical Studies

SURREY... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

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OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Preparatory Schools

SURREY... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

History

LEICESTERSHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

Modern Languages

CHESHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

By Subject Classification... ASSISTANT TEACHER (non-teaching) for September 1977...

Other Assistants... ASSISTANT TEACHER (non-teaching) for September 1977...

LONDON... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

SURREY COUNTY COUNCIL ASSISTANT TEACHER... FRINGE AREA LONDON ALLOWANCE £160 p.a. THROUGHOUT THE COUNTY...

HERTFORDSHIRE... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

OXFORD... ASSISTANT TEACHER (non-teaching) for September 1977...

EDUCATIONAL REPRESENTATIVE... Helmenann Educational Books wishes to recruit a new member to its educational sales force...

EDUCATIONAL REPRESENTATIVE... Helmenann Educational Books wishes to recruit a new member to its educational sales force to cover North West England and North Wales...



COLLEGES OF FURTHER EDUCATION continued

SOUTH TYNSIDE

Head of Department of Mechanical Engineering at the Technical College, Newcastle upon Tyne.

Applications are invited for the position of Lecturer in Mechanical Engineering at the Technical College, Newcastle upon Tyne.

Head of Department of Mechanical Engineering at the Technical College, Newcastle upon Tyne.

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Head of Department of Mechanical Engineering at the Technical College, Newcastle upon Tyne.

Applications are invited for the position of Lecturer in Mechanical Engineering at the Technical College, Newcastle upon Tyne.

STRATHCLYDE REGIONAL COUNCIL DEPARTMENT of EDUCATION

Further Education

Applications are invited for the undernoted posts. All candidates should have relevant industrial or commercial experience where appropriate.

Applications are invited for the position of Lecturer in Mechanical Engineering at the Technical College, Newcastle upon Tyne.

Applications are invited for the position of Lecturer in Mechanical Engineering at the Technical College, Newcastle upon Tyne.

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Applications are invited for the position of Lecturer in Mechanical Engineering at the Technical College, Newcastle upon Tyne.

EDWARD MILLER, Director of Education.

BOURNEMOUTH AND POOLE COLLEGE OF FURTHER EDUCATION

Required for 1st September, 1977 - Lecturer Grade I Food Preparation

A lecturer with first-class trade experience is required to teach the theory and practice of Food Preparation...

Lecturer Grade I Business Studies

to teach English and Communications on a range of Business and Secretarial Examination Courses at FE level.

Sheffield Education

Applications are invited for the following posts - Lecturer Grade I in Business Studies

Lecturer Grade I in Mechanical Engineering

Salary £2,468 to £4,377 plus £312 Supplement and further supplement of £132 to £180

City of Manchester

EDUCATION COMMITTEE Lecturer I in English (Temporary one year)

Required in September, a suitably qualified and experienced person to teach both Literature and Language/Communications with the General and Administrative Studies Department of the College.

ABERDEEN ROBERT GORDON'S INSTITUTE OF TECHNOLOGY

SCHOOL OF NUTRITIONAL SCIENCE LECTURER

with good honours degree in Food Science, Nutrition, Microbiology, Biochemistry or related subject and preferably with State Registration in Dietetics...

CITY OF BIRMINGHAM EDUCATION DEPARTMENT FURTHER EDUCATION

BOURNVILLE COLLEGE OF FURTHER EDUCATION BRISTOL Road South, Birmingham B31 2AJ

LECTURER I in GEOGRAPHY to "A" level and ECONOMIC GEOGRAPHY in ONC in Business Studies.

LECTURER I in BIOLOGY and HUMAN BIOLOGY to advanced GCE standard.

BIRMINGHAM COLLEGE OF FOOD AND DOMESTIC ARTS Summer Row, Birmingham B3 1JB

LECTURER I in SOCIAL WORK. Ability to contribute to the organisation and teaching of Certificate in Social Services and In-Service Residential Care courses would be advantageous.

GARRETS GREEN TECHNICAL COLLEGE Garrets Green Lane, Birmingham B33 6TS

LECTURER GRADE I required to teach HEATING and VENTILATING FITTING and WELDING to craft apprentices from the industry...

Brixton College for Further Education 88 Brixton Hill, SW2 1QS

Department for General Education Senior Lecturer

required for January 1978 to be responsible to the Head of Department for the organization and administration of full and part-time courses of general education below C.C.E. "O" level...

Department for Commercial Education Lecturer I

required for September 1977 to be responsible for the teaching of ART in the department. The subject is taught to C.C.E. "A", "O" level and non-examination general education classes...

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Bexley London Borough ERITH COLLEGE OF TECHNOLOGY

Applications are invited for the following post to the effect as soon as possible. Stages I and II of the College on a magnificent site near the existing buildings are now complete and in full occupation.

LECTURER GRADE II IN RESIDENTIAL CARE

Required to be responsible for the organisation of On and Residential Care Courses and act as course co-ordinator for the In-Service Residential Care Courses...

LECTURER GRADE II IN RESIDENTIAL CARE

Required to be responsible for the organisation of On and Residential Care Courses and act as course co-ordinator for the In-Service Residential Care Courses...

Vauxhall College of Building and Further Education

Department of Technician Studies Lecturer I

In Building Engineering Services Required from 1st September, 1977: A Lecturer Building Services to assist with teaching to the City Guilds Plumbing Technician Courses and also the City Guilds Services to various other courses in the Construction including mid-Career Courses.

Department of Building Crafts Lecturer II

Trowel Trades - Brickwork Head of Section to organize and coordinate the Courses for the Construction Industry and work of a large and progressive Building Craft Centre...

Department of Building Crafts Lecturer II

Finishing Trades - Glazing Head of Section to organize and coordinate glazing work for the Construction Industry in the South of England...

ileas Application forms available from the Applications Secretary on receipt of S.A.E. (quoting appropriate reference) returnable by 1st July, 1977.

COLLEGES OF FURTHER EDUCATION continued

WAKEFIELD (City of) METROPOLITAN DISTRICT WHITWELL MINING AND ENGINEERING COLLEGE

LECTURER I in BIOLOGY to "A" level and ECONOMIC GEOGRAPHY in ONC in Business Studies.

LECTURER I in BIOLOGY and HUMAN BIOLOGY to advanced GCE standard.

BIRMINGHAM COLLEGE OF FOOD AND DOMESTIC ARTS Summer Row, Birmingham B3 1JB

LECTURER I in SOCIAL WORK. Ability to contribute to the organisation and teaching of Certificate in Social Services and In-Service Residential Care courses would be advantageous.

GARRETS GREEN TECHNICAL COLLEGE Garrets Green Lane, Birmingham B33 6TS

LECTURER GRADE I required to teach HEATING and VENTILATING FITTING and WELDING to craft apprentices from the industry...

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YOUTH AND COMMUNITY SERVICE continued

ROTHERHAM... Invitations are invited from suitably qualified...

YOUTH WORKER... Invitations are invited from suitably qualified...

Overseas Appointments

THIKA... Invitations are invited from suitably qualified...

BOTSWANA... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

MOZAMBIQUE... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

JAPAN TEACHERS... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

GREECE... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

SPAIN... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

GERMANY... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

AFRICA... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

ITALY... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

FRANCE... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

HAMBURG LANGUAGE SCHOOL... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

AUSTRIA... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

CANADA... Invitations are invited from suitably qualified...

Invitations are invited from suitably qualified...

EDITORIAL ASSISTANT

required for a major educational publishers in WEST BERLIN

We are looking for a man or woman to join our young Anglo-German team engaged in the preparation of English language teaching material for German secondary schools...



OVERSEAS DEVELOPMENT

KNOW-HOW vital to developing countries

Expert in Electronics

Indonesia

To advise and assist Director of Technical Training Centre, Medan, in relevant technical education matters...

For full details and application forms please apply, quoting reference 317, stating post concerned, and giving details of age, qualifications and experience to —



Appointments Officer, MINISTRY OF OVERSEAS DEVELOPMENT, Room 301, Eland House, Stag Place, London SW1E 5DH.

HELPING NATIONS HELP THEMSELVES

OVERSEAS DEVELOPMENT

KNOW-HOW vital to developing countries

Education Overseas

Secondary Education: Teacher of Technical Studies

CAYMAN ISLANDS

To teach either woodwork/metalwork or technical drawing to junior classes; to teach motor mechanics to middle and senior classes...



Appointments Officer, MINISTRY OF OVERSEAS DEVELOPMENT, Room 301, Eland House, Stag Place, London SW1E 5DH.

HELPING NATIONS HELP THEMSELVES

Papua New Guinea Secondary and Teacher Education Posts

The expansion and development of our education programme offers a substantial number of opportunities for suitably qualified teachers in both Secondary School and Teacher Training establishments in Papua New Guinea...

Secondary Education

Headmaster (Education Officer Level 8) To be responsible for a National High School. Recognised qualification and degree plus extensive experience at senior level in educational administration essential.

Curriculum Development Officers (Education Officer Level 4) To assist in the development of curricula and materials for teaching specialist subject areas in National High Schools...

Senior Subject Masters (Education Officer Level 3) To teach, coordinate and direct the work of Subject Masters together with supervision of in-service training of junior staff...

Pay per Annum

Expressed in Kina. Current rate of exchange K1.38 = £1.00.

Table with 3 columns: Level, Salary, Annual Bonus. Levels 2-8.

Subject Masters (Education Officer Level 2) To teach and supervise a subject or group of subjects including the supervision of in-service teaching of junior staff...

Primary Teacher Education

Senior Lecturers (Education Officer Level 7) With previous primary teacher training experience, a degree or other recognised qualification plus specialist qualifications in their discipline...

Lecturers (Education Officer Level 4) Primary teaching and teacher training experience essential together with professional qualifications, appropriate degree or other recognised qualification...

Bonus is payable on satisfactory completion of Period of Engagement - two years (renewable in most instances). General entitlements are very attractive and include an education allowance for dependent children...

Papua New Guinea







ENGLISH AS A FOREIGN LANGUAGE continued

LEICESTERSHIRE LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY RECREATION MANAGEMENT

SUMMER SCHOOL IN CANTERBURY AREA. One week residential course for children aged 12-16 from 27th July to 3rd August 1977.

A short course programme in recreation management designed primarily for people who are already working in the field.

VACATIONAL STUDIES. Required for four-week residential English Language course for students aged 12-16 from 27th July to 3rd August 1977.

LONDON THE NATIONAL HOSPITALS COLLEGE OF HUMAN SCIENCES

T.E.F.L. COURSES. The only fully qualified teachers of English as a foreign language.

PERSONAL LOANS. Established 1924. 13 BISHOPSGATE, LONDON E.C.4A

For Sale and Wanted and Postal Shopping

PERSONAL LOANS. Unsecured loans up to £5,000. BIRMINGHAM

SALARIED PERSONS POSTAL LOANS LTD. Advance £10 upwards plus daily interest

STOP! DISSECTION OF ANIMALS IN SCHOOLS NOW

TEACHERS' WORLD TRAVEL. Details of the British Association of Teachers' World Travel

COSTUME HIRE for Gilbert and Sullivan Operettas. Includes costumes for all characters

GRAMOPHONE records professionally produced from your tapes

IMMEDIATE mortgages available. Up to £50,000 on 25 year old properties

MAXIMUM mortgages for teachers. Up to £50,000 on 25 year old properties

RECEPTION/INFANT TEACHERS. Now a valuable job in educational progression

BAVU UP TO 45% ON RECOMMENDED RETAIL PRICES

WRITE and sell Children's Stories. £100 per week with no experience

BERNSTEIN GALLERY. Contemporary painting and sculpture

SCHOOL THROUGH THE CHILDREN. One day course for parents

BRITISH MUSEUM. Wealth of the Middle Ages. Exhibition from 19th July to 3rd September

EMIGRATE WITH BREWER & TURNBULL. Two centuries of emigration

FOR LOANS AND MORTGAGES. THE PROFESSIONAL PROMISER. Loans up to £25,000

IMMEDIATE ADVANCES. REGIONAL TRUST LTD. £100 to £10,000

MORTGAGES. Up to 100 per cent with Endowment Assurance

MORTGAGES UP TO 100%. For tenants and other professional people

OPEN CONFERENCE OF N.U.T. MEMBERS. 1000 people at 1000 places

BIRMINGHAM UNIVERSITY STUDENTS' UNION. For further information

ARTS THEATRE. £25,000. £25,000. £25,000. £25,000

FIELD STUDIES. CLINICAL PSYCHOLOGY. Details of courses and fees

JOURNALS OF A LIFE. The diary of a woman's life

SNOWDONS. The highest point of Snowdonia

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# Step by note by step

**Sesmary Hartill visits Ballet Rambert**

...let Rambert are making yet their dance experiment. This is a total reassessment of the relationship between dance and music.

# I was young and easy

...I was young and easy. The title of Dylan Thomas's "Fern" composed by Robert Sparo.

# Broadcasting/Films/Briefings

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**Masterworks**

Carolyn O'Grady. The National Gallery is carrying out an experiment: it has asked well-known modern artists, Anthony Caro, to choose a number of the gallery's old masters which have particular significance for him.

**Briefings**

Radio and tv. **OU and FE**. Creativity and the Grand Inquisitor. Part 2: Monday 06.00 VHF4.



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## Masterworks

Carolyn O'Grady. The National Gallery is carrying out an experiment: it has asked well-known modern artists, Anthony Caro, to choose a number of the gallery's old masters which have particular significance for him.